

CLAIMS

1. A method of protecting a solid-state protein from ionizing radiation which comprises
5 combining said protein with a radiation-protecting amount of a methoxysalicylaldehyde derivative prior to exposing said protein to said ionizing radiation.
2. A method according to claim 1 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
- 10 3. A method of protecting a solid-state protein from ionizing radiation which comprises combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde derivative and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid prior to exposing said protein to said ionizing radiation.
- 15 4. A method according to claim 3 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
5. A method of protecting a solid-state protein from ionizing radiation which comprises
20 combining said protein with radiation-protecting amounts of a methoxysalicylaldehyde derivative and isopropanol prior to exposing said protein to said ionizing radiation.
6. A method according to claim 5 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.
- 25 7. A formulation comprising a solid-state protein and a methoxysalicylaldehyde derivative.
8. A formulation according to claim 7 wherein said protein is a drug.
- 30 9. A formulation according to claim 7 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

10. A formulation according to claim 7 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation.

11. A formulation according to claim 10 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation.

12. A formulation comprising a solid-state protein, a methoxysalicylaldehyde derivative, and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

13. A formulation according to claim 12 wherein said protein is a drug.

14. A formulation according to claim 12 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

15. A formulation according to claim 12 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises at least about 0.1% by weight of said formulation.

16. A formulation according to claim 15 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation, and said 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid comprises from about 0.1% to about 1.0% by weight of said formulation.

17. A formulation comprising a solid-state protein, a methoxysalicylaldehyde derivative, and isopropanol.

18. A formulation according to claim 17 wherein said protein is a drug.

19. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

20. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative comprises at least about 0.1% by weight of said formulation, and said isopropanol comprises at least about 0.1% of said formulation.

5 21. A formulation according to claim 17 wherein said methoxysalicylaldehyde derivative comprises from about 2.9% to about 8.0% by weight of said formulation, and said isopropanol acid comprises from about 0.1% to about 4.0% of said formulation.

10 22. A composition comprising a methoxysalicylaldehyde derivative and 6-hydroxy-2,5,7,8-tetramethylchroman-2-carboxylic acid.

23. A composition according to claim 22 wherein said methoxysalicylaldehyde derivative is 3-methoxysalicylaldehyde.

15 24. The use of said composition of claim 22 in pharmaceutical formulations as a radioprotectant.